SGI MPT

Category: MPI Libraries

DRAFT

This article is being reviewed for completeness and technical accuracy.

SGI's Message Passing Interface (MPI) is a component of the Message Passing Toolkit (MPT), which is a software package that supports parallel programming across a network of computer systems through a technique known as message passing. It requires the presence of an Array Services daemon (arrayd) on each host to run MPI processes.

SGI's MPT 1.x versions support the MPI 1.2 standard and certain features of MPI-2. The 2.x versions will be fully MPI-2 compliant.

On Columbia, the current system default version is mpt.1.16. A 2.x version will be available when the operating system is upgraded to SGI ProPack 7SP1.

On Pleiades, there is no default version. You can enable the recommended version, mpt.2.04.10789, by:

```
%module load mpi-sgi/mpt.2.04.10789
```
Note that certain environment variables are set or modified when an MPT module is loaded. To see what variables are set when a module is loaded (for example, mpi-sgi/mpt.2.04.10789), do:

```
%module show mpi-sgi/mpt.2.04.10789
```

To build an MPI application using SGI's MPT, use a command such as one of the following:

```
%ifort -o executable_name prog.f -lmpi
%icc -o executable_name prog.c -lmpi
%icpc -o executable_name prog.cxx -lmpi++ -lmpi
%gfortran -I/nasa/sgi/mpt/1.26/include -o executable_name prog.f -lmpi
%gcc  -o executable_name prog.c -lmpi
%g++ -o executable_name prog.cxx -lmpi++ -lmpi
```

Article ID: 89
Last updated: 03 Oct, 2011